

## Viewpoint

## Climate change and the relational city

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## ABSTRACT

While the goals of sustainability and resilience look to the health and function of the system, a new criterion, relationality, focuses relationship and the degree of connectedness, social and otherwise, among persons (and even nonhuman others). It is founded upon an ethic of care that posits that no one is left alone, and that society must place a primary focus on the most vulnerable. This is particularly relevant when considering how cities are beginning to deal with increasingly frequent and severe weather events due to climate change. The idea of relationality is contrasted with the social and political isolation that exacerbates the effects of extreme events on the most vulnerable. The article ends with a discussion around how we might envision and craft the relational city and how this ideal responds to the challenge of climate change and extreme weather.

## 1. Introduction: relationality as an urban ethic

As climate modeling steadily improves, scientists are beginning to predict, with increasing confidence, that such extreme events (whether of tropical cyclones, heat waves, or record monsoons) may be increasing in frequency and magnitude. While scientists can posit more and stronger weather events each year, no one can say which particular communities will be struck in any given year. It may be that, in coming decades, more and more communities will have to deal with an extreme event that they had never before experienced. The consequences of this eventuality on urban development and city management will be far-reaching.

In 2012, Superstorm Sandy swept through the New York/New Jersey area, surprising many residents who had not experienced such flooding and storm surge before. Power and other services went down in many areas for more than a week or more. Most of the population emerged from the experience in relatively good shape, and they quickly resumed normal life. But for some groups, such as the elderly residents in the Red Hook Houses in Brooklyn, the story was much different, and many of them suffered hours and days, essentially trapped in their flooded apartment buildings, unable to leave or get help. The majority of the deaths from Superstorm Sandy were of elderly, lower-income residents.

In November the following year, Typhoon Haiyan struck Tacloban City, Philippines. While the record winds and storm surge were predicted days in advance, as with Sandy, many residents were caught off guard by surge-induced flooding that they had never before experienced. At least 6000 people did not survive. Many of the victims in the hardest hit areas were urban poor, living in unstable, informal

structures near the coastline and riverbank (Paragas, Rodil, & Pelingon, 2016).

In terms of the scale of human tragedy, the most devastating event remains the Bhola cyclone of 1970, when a massive storm surge that struck the southern region of Bangladesh and claimed more than 300,000 lives. Although authorities knew of the cyclone well in advance, the challenges of warning and preparing the residents of the southern coast proved insurmountable (Frank and Husain, 1971). Recognizing the failure of the emergency preparedness system, the government subsequently created the Cyclone Preparedness Programme (CPP), which combined government and community residents under one umbrella organization. The CPP includes more than 40,000 volunteers from flood-prone villages (Paul & Routray, 2013) and is heavily engaged in community-based early warning programs. The CPP has to work with unprecedented challenges, including extreme poverty, pockets of low literacy, and infrastructure-deficient communities.

Looking back on these three tragedies, we can find a number of problematic things that increased the severity of the events. First, we found communities who experienced such an event for the very first time and, as such, were mentally and logistically unprepared for it.

The second commonality is that the impact and suffering, due to these extreme events, are not evenly experienced across a population, but most felt by pockets of vulnerable urban residents. The general demographics of vulnerability are well known in the literature – the very young and very old, the low-income, ethnic minorities, and undocumented migrants (Cutter, 2012; Faber, 2015).

We focus on a third commonality, which increases the vulnerability of already disadvantaged groups, and it is the problem of disconnectedness. For more than a week, many elderly residents of Red

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Hook Houses were essentially isolated in their apartments, without power, water, and working elevators. Red Hook, itself, is a lower-income neighborhood that is more isolated than other parts of Brooklyn, not having a subway stop and having had a bus route cancelled. For these and other reasons, residents of Red Hook Houses were isolated from the main. Post-Sandy assessments implicated social and geographic isolation as complicit in the troubles of Red Hook. For example, the lack of public transportation makes it less likely residents would consider evacuating and, conversely, adds to the difficulty of emergency aid accessing the neighborhood (Williams, 2014). Greater proportions of elderly, poor, and minority ethnic communities in Red Hook were also a factor in the reduced access to services before, during, and after Sandy (Faber, 2015).

Disconnectedness was a contributing factor in Tacloban City, as well. Previous research showed that, while the unusually strong winds and storm surge were predicted days in advance, warnings were not tailored to particular communities and, as such, received by the public as routine technical bulletins. There was a lack of connectedness between sources of knowledge and people on the ground (Lejano, Tan, & Wilson, 2016). Social isolation was a factor, as well, as some residents live a completely domestic day-to-day existence, isolated from networks of communication outside the home (Lejano, Casas Jr, Montes, & Lengwa, 2018a). Some estimates suggest that informal settlers were disproportionately impacted by Haiyan (Lagmay et al., 2015) and that these informal settlers were less likely to evacuate due to fear of permanent eviction (Walch, 2018).

In this article, we highlight the problem of disconnectedness, where pockets of vulnerable members of a community are isolated from routes of communication, services, and social networks. As the early urban sociologists noted (e.g., Wirth, 1938), it is in the anomie of the modernized, atomistic society, where the loss of social ties leaves individuals to fend for themselves, that vulnerability leads to tragedy.

On the other end of the spectrum, we might envision a differently constructed urban sociality, where no one is alone, and each person is connected to social networks both formal and informal. We might refer to this ideal as the *relational city*, where social ties are rich, and the day hums with a multitude of interactions among its residents. The concept of *relationality* is founded upon an ethic of care and explicitly seeks the interest of the most vulnerable in society (e.g., Lejano & Funderburg, 2016; Lejano, Guo, Lian, & Yin, 2018b). In the following section, we will discuss further, the ethic of relationality and what it means for city form and function.

## 2. Envisioning the relational city

How do we begin re-imagining the city vis-à-vis global environmental change? Thus far, urban planners and scholars have been influenced by two overarching concepts.

The first, sustainability, projects future states of the world, where resources and quality of life are maintained at some desired level (Zhang & Li, 2018). Sustainability also requires imagining a path toward these futures. Its original focus has always been on preventing degradation of environment and social wellbeing and redesigning material inputs and outputs to reduce the human “ecological footprint”.

The second, resilience, recognizes the seeming inevitability of sweeping global changes (the foremost of these, of course, being climate change). In the face of such change, the resilience ethic involves building up defensive or adaptive processes so that societies can withstand such change and maintain system functioning and quality of life. Resilience can mean systems that are robust, which “bounce back” to normal states after perturbation. Resilience can also mean adaptive systems that transform themselves to function better even in the face of external shocks (see Chu, Anguelovski, & Roberts, 2017, for a review).

Sustainability and resilience are, of course, broad general conceptual frames that have widely varying interpretations. In a review of the literature on urban sustainability and urban resilience, Zhang and Li

point out the widely varying shades of meaning of both terms (2018). But where both overlap is that, generally speaking, both sustainability and resilience are systems concepts. That is, these concepts adopt a systemwide view and focus on system function over time or in the face of external shocks. In this article, we propose another conceptual frame, which is relationality.

Relationality speaks to the way and the degree by which each person in a system (e.g., the city) is connected to others (including nonhuman others) in the system and connected to the system as a whole. This dimension of connectedness pertains to the idea of a city as a social network or a web of relationships. Relationality is also about the degree to which each one's needs, aspirations, and situations are acknowledged by the rest of the system and addressed. More so than sustainability and resilience, relationality is person-centric, because it focuses on the person and her immediate context. It is process oriented because, more than outcomes, relationality focuses on mechanisms by which each person's condition is recognized and responded to.

Sustainability and resilience have, at their core, their basis in both utilitarian and deontological ethics. Sustainability criteria, for example, speak to maintaining overall utility (expressed as quality of life) over time. In fact, what is commonly referred to as the weak sustainability criterion (Dietz & Neumayer, 2007) is essentially a statement of Pareto efficiency. But both sustainability and resilience also have, embedded in most of their meanings, an ethic of justice. For example, the Millennium Development Goals set baseline minimum standards that must be met for all people—essentially, a deontological concept.

Relationality, on the other hand, has as its basis an ethic of care (Gilligan, 1982). Care has some grounding in the phenomenological idea of intentionality (Husserl, 1900), which understands other-regard (or seeking out or caring for the other) as the most basic human condition. But its most relevant statement comes from Gilligan, who wrote about care in these terms:

“The morality of rights is predicated on equality and centered on the understanding of fairness, while the ethic of responsibility relies on the concept of equity, the recognition of differences in need. While the ethic of rights is a manifestation of equal respect, balancing claims of other and self, the ethic of responsibility rests on an understanding that gives rise to compassion and care.”

(Gilligan, 1982, 164)

and

“the ideal of care is thus an activity of relationship, of seeing and responding to need, taking care of the world by sustaining the web of connection so that no one is left alone.”

(1982, 62)

Relationality is thus the property of a system that is founded upon such an ethic of care. It aims, at first, making sure that everyone is connected, and that no one is isolated from networks of information, services, and social interaction. Secondly, it creates processes by which each person's unique individual needs and preferences are recognized by the system and provided for. More than looking out for the health of the system as a whole, relationality seeks out the welfare of the most vulnerable.

The relational city is constructed upon connectivity. This means a city where social ties, were we to map them for each individual, are great in extent and thickly dense. Such a city would build institutions for directly connecting each member to formal and informal networks for governance. And there would exist a social safety net that would address the needs of the most vulnerable groups in the city. This means allocating greater resources and attention to the needs of the vulnerable, which is distinctly different from cities that cater to the wealthy (or to the “median voter”).

The concept of relationality echoes some of the literature on the sustainable city. Marcuse envisions expanding upon the notion of a just city, with its focus on distributional equity, to the idea of rights to the

city, which seeks the inclusion of the excluded (Marcuse, 2009, 2012). While Marcuse does not employ the terminology of relationship, his proposal for a reconfiguration of rights and obligations implicitly requires a reframing of relationships among policy actors. In expanding rights to the city to include recognition of the dignity and richness of culture of communities, Marcuse's proposal calls to mind the ethic of care that seeks out the vulnerable "other". Similarly, Agyeman, in proposing the idea of just sustainability, broadens the notion of justice to encompass recognition and process (Agyeman, 2013, pg. 38), which goes beyond focusing on system outcomes to recognizing the experiences and agency of the hitherto excluded.

How do we design and manage the relational city? First, it requires building in institutions (which are processes and resources) that ensure each person is connected to the whole. That is, each person has a means to reach out for help or to participate. Moreover, these connections have to be direct and personal –i.e., the idea is not so much that of a "hotline" where anyone can call in their concern, but a relationship between a resident and a physical person who is tasked with working on the needs and preferences of a community. A relevant idea, taken from the health services sector, is that of the individualized case manager. Institutions for connecting people have, elsewhere, been described as structures of care, emerging from urban planning practices that are not merely rational but relational, as well (Lejano, 2008; Lejano & Funderburg, 2016).

If we could map a city as a web of relationships, what would it look like? Would it look like an intricate social network diagram, or a choropleth map showing the density of interpersonal interaction? In an interesting exercise, Peter Orleans once asked different individuals to prepare free sketches (what are referred to as cognitive maps) of the parts of the city that they visit, are familiar with, or interact with (Orleans, 1973). Two contrasting maps are shown in Fig. 1, for illustration. The figure shows cognitive maps shown for residents in a high-income community and a lower-income one. When these maps were prepared, the two communities were also distinctly different in ethnic

composition.

The maps are striking in their contrast. It suggests that individuals with greater resources are able to take in almost the entire city, having connections with a wide range of contacts spread out broadly and densely over the city. In contrast, the lower-income individual's cognitive map is much less extensive, with a smaller spatial reach and less-dense network. The lesson is that there is something empowering about connectedness, allowing an individual to navigate and take advantage of the myriad offerings of the city.

As Bourdieu described it, social ties are a kind of capital that people can use to thrive regardless of wealth (Bourdieu, 1990). But exclusion is not solely a social phenomenon. People can be isolated by virtue of scarcity of resources, infrastructure deprivation, and other material factors. Empowering the excluded will require, as Bourdieu described it, multiple forms of capital (Bourdieu, 1986). The concept of relationality pertains to groups, as well as individuals, since structural patterns of connectedness will impact entire communities.

The idea of relationality is immediately relevant to the specter of climate change, which threatens to increase the vulnerability of the already marginalized members of society. Instead of further isolation in the face of extreme events, the response of the relational city is increasing connectivity, guided by an ethic of care. The needs of the most impacted are accorded the highest priority, which means allocating greater resources to vulnerable groups than to the general population.

### 3. Conclusion: implications for practice

How might we translate the idea of relationality into practices that respond to the challenge of climate change, especially the prospect of more and more extreme weather events? We might posit a few principles for practice:

- i. Seek out the communities that are most vulnerable and create programs specifically focused around their needs.

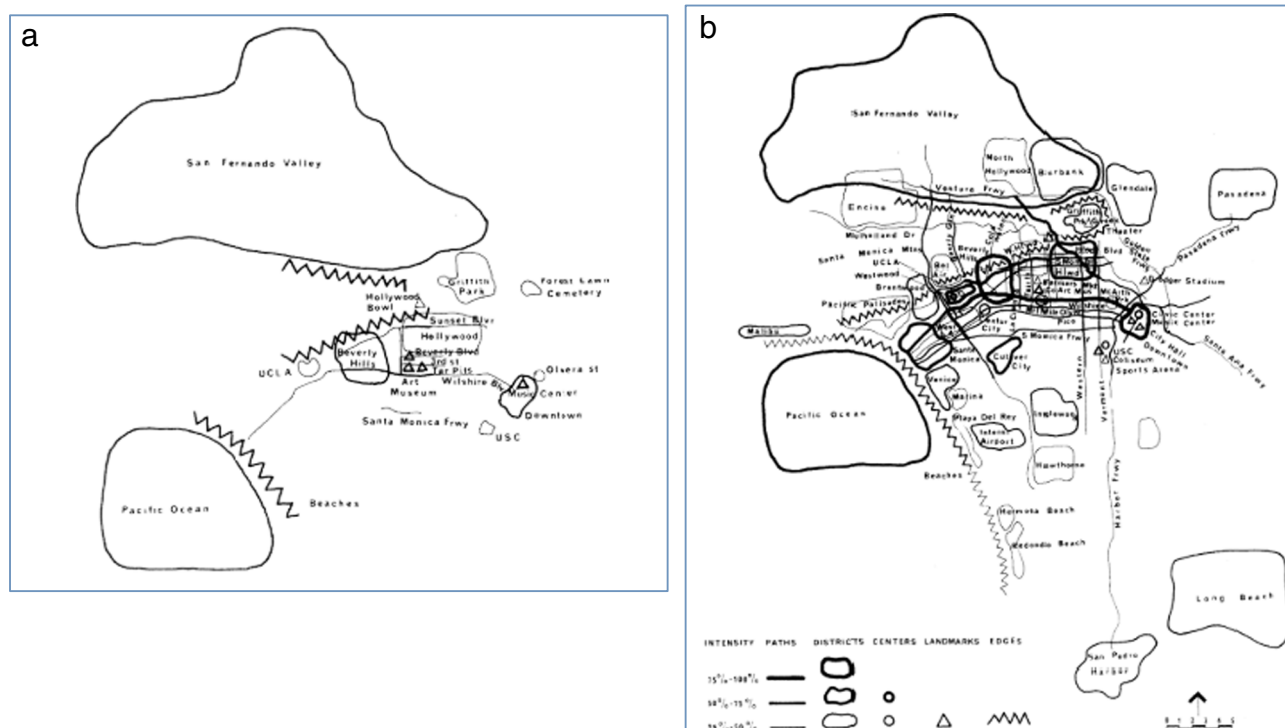


Fig. 1. a and b. Cognitive maps from residents of Fairfax (left) and Westwood (right). Source: Orleans (1973).

- ii. Establish communication processes (both formal and informal) with these particular communities and initiate regular interaction and exchange of knowledge.
- iii. Design “specs” into infrastructure and service delivery projects that are tailored to the needs of these communities, rather than just standard project specifications.
- iv. Seek to build infrastructure and subsidized services that ensure these communities are “wired” into networks of knowledge and program implementation.
- v. Allocate resources, even in disproportionate fashion, in favor of the most vulnerable groups.
- vi. Somehow, “map” and monitor these networks to look for system gaps and to assess whether connectivities are improving and densifying over time. At the same time, look for pockets of communities that are still isolated, in terms of communication, services, or spatial linkages.
- vii. Train agency staff to be sensitive to how their discourse and routines alienate marginalized communities and position them as passive, silent recipients of aid instead of active, agentic actors.

The last recommendation draws from critical urban theory (e.g., Marcuse, 2009), which seeks to uncover hegemonic structures that are often embedded in the institutional milieu. Disconnectedness is a form of alienation, exacerbated by structures that promote the voicelessness of the subaltern (Spivak, 1988; Pulido, 2015).

To accomplish measures such as the above, there may need to be a reassertion of the public sphere, where the state, community organizations, and other public actors intervene in the workings of the private market (Lejano & Funderburg, 2016; Marcuse, 2015). Politically, this may require an enlargement of the public sphere, but this is characteristic of urban programs around sustainability and resilience, as well. The differences lie in the nature of the public interventions. In the case of the relational city, there is an emphasis on building agency, capabilities, and connectedness among the hitherto excluded (e.g., Nussbaum, 1997; Sen, 1985).

As an example, we might cite the efforts of disaster risk reduction programs that are trying to respond to the challenge of increasing extreme weather events. As discussed earlier, on Bangladesh, this task falls on the shoulders of the CPP (the Cyclone Preparedness Programme). In the city of Cox's Bazar, an area particularly vulnerable to storm surge, the CPP has begun work with other national and international stakeholders along the lines of that described above. First, they have identified the communities at greatest risk from impact from the coming cyclone and monsoon season. This includes more than 100,000 Rohingya settlers who fled nearby Myanmar and now live in refugee camps in the city's edge.

Having identified the vulnerable communities, the next step is connecting these to networks of communication. This meant, in Cox's Bazar, inter-agency task forces that meet with representatives of the Rohingya community at regular intervals. This then involved deputizing two hundred members of the Rohingya community to train and serve as CPP deputies, charged with communicating risks from extreme weather and coordinating emergency preparedness measures (e.g., identifying evacuation measures). Thus, while formally and legally, the Rohingya refugees exist in a state of limbo, they have become part of the CPP's focus and jurisdiction. Connectivity characterizes the institutional setting as well, as the CPP is not able to work alone but, instead, shares responsibilities with a wide range of government and international organizations, including the Red Cross, United Nations High Commissioner for Refugees, World Bank, and others.

Relationality responds to the issues of vulnerability and isolation that were brought up earlier. But it also responds to the dimension of surprise, when communities are suddenly besieged by events that lie outside the local personal and institutional memory. In Bangladesh and other places, disaster risk reduction practitioners are beginning to employ media, such as videos of survivors of weather-related tragedies,

to convey the singular experiences to communities that have not yet experienced such.<sup>1</sup>

In a city founded upon an ethic of care, people from different sectors and communities encounter each other on a daily basis in face-to-face interactions (or, using media, simulated face-to-face interactions), and institutions emerge from the working and reworking of such relationships. At times, sustainability and resilience can be culturally alienating concepts, speaking in the voice of the privileged. But a relational perspective puts prime focus on the needs, aspirations, and voice of the hitherto unheard.

In the relational city, everyone is connected, and webs of relationships are rich and densely packed. To paraphrase John Donne's poem:

No one is an island entire of itself;  
every one is a piece of the continent,  
a part of the main...<sup>2</sup>

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<sup>1</sup> An example of this can be found at <https://www.environmental-communication.space/digitalnarratives> which is part of the project, Democratizing Risk Communication.

<sup>2</sup> Based on Devotions upon Emergent Occasions, by John Donne.

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